



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/795,817	03/08/2004	Narasimhan Venkatesh	RED - RACK 030804	2777

7590 04/16/2007
Jay Chesavage
3833 Middlefield Rd.
Palo Alto, CA 94303

EXAMINER

AHN, SAM K

ART UNIT	PAPER NUMBER
----------	--------------

2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/795,817

Applicant(s)

VENKATESH ET AL

Examiner

Sam K. Ahn

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-105 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-51, 76-103 and 105 is/are rejected.
- 7) ☒ Claim(s) 52-75 and 104 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17 2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 070604.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 1-9 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. Claims 2-25 and 27-105 are objected to because of the following informalities:

In each of the dependent claims of 2-25, 27-51, 53-76 and 78-105, "... claim n where..." should be "... claim n wherein ...", n is the claim number.

Art Unit: 2611

In claim 16, lines 2-3, "the Q channel" should be "a Q channel" and define Q.

In claim 17, lines 2-3, "said training decision" should be "a training decision".

In claim 52, on page 44, line 12, "the said" should be "said", lines 14 and 15, "incoming" should be "incoming serial", line 23, "said window... said window" should be "a window... a window".

In claim 77, on page 48, line 24, "memory;" should be "memory when said training decision output is false; and".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 26-51 and 103 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 26, on page 40, lines 5-8, recites "a decision state whereby said serial stream of baseband symbols is multiplied by the complex conjugate of the contents of said channel profile memory...". It appears that the claim is reciting the output of element 272 in Fig.10 multiplied with signal line 266 in the multiplier

Art Unit: 2611

element 278. The signal present in the signal line 266 is received from the sliding correlator 250 providing correlation peaks. However, the claim recites that "said serial stream of baseband symbols" which appears to be present in signal line 286 is provided to element 278. The specification, note particularly page 27, describes the above operation, however, does not describe the claimed limitation in such a way as to reasonably convey to one skilled in the art of the limitation above.

Claims 27-51 and 103 directly or indirectly depend on claim 26.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-51, 76-103 and 105 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 77 recite the limitation "said window" in lines 24 and 25 and on page 49, lines 5 and 6, respectively. There is insufficient antecedent basis for this limitation in the claim. In line 8, the claim recites "a window output". However, it is unclear if the "said window" is referring back to the "window output", wherein window output is different from a window. Therefore, it is unclear and indefinite for failing to particularly point out and distinctly claim the subject matter.

Claims 2-25, 59, 76-102 and 105 directly or indirectly depend on claim 1 or 77.

Claim 19, line 2, recites the limitation "... adds quadrature said correlation peak output...", wherein it is unclear and indefinite as to the exact operation occurring herein.

Claim 26 recites the limitation "said adder" in line 10. There is insufficient antecedent basis for this limitation in the claim. On page 40, line 2 of the claim sheets recites "...peaks added..." Is the adder in line 10 referring to the operation recited in line 2? However, the claim does not previously recite having an adder, therefore, it is unclear and indefinite for failing to particularly point out and distinctly claim the subject matter.

Claims 27-51 and 103 directly or indirectly depend on claim 26.

Allowable Subject Matter

6. Claims 1-51, 76-103 and 105 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph and/or claim objections, set forth in this Office action.
7. The following is a statement of reasons for the indication of allowable subject matter: present application discloses a method and an apparatus of a correlator in a receiver comprising a sliding correlator, training decision function, memory and an accumulator. Prior art teaches the element above. However, prior art does not explicitly teach the configuration of the element claimed wherein output of the correlator when training decision output is true, is added by the output of the channel profile memory and complex conjugated and when is false, is inversed and added by

the output of the channel profile memory and complex conjugated to be multiplied by the correlation peaks.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zhou et al. US 2003/0012270 teach a receiver comprising a sliding correlator coupled to a memory for determining timing determination of a received signal.

Matsuyama et al. US 2004/0170238 teach frequency synchronizing apparatus comprising a correlator multiplying with a complex conjugate and further coupled to a memory device in order to provide a peak value.

Venkatesh et al. US 2004/0240486 teach a receiving correlating with a Barker correlator.

Ettorre et al. US 2006/0133456 teach a memory aiding in performing a complex conjugate operation in a correlator receiver.

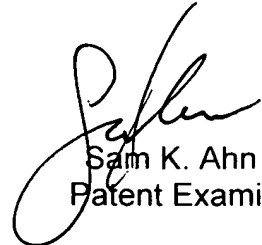
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

Art Unit: 2611

direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam K. Ahn
Patent Examiner

4/11/07